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United States Environmental Protection Agency

Region 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

December 18, 2009

ACTION MEMORANDUM

SUBJECT: Approval and Funding for a Removal Action at the All American Metal Finishing Site ("Site"), Kent, King County, Washington

FROM: Diane Dettling, On-Scene Coordinator *Jeffrey Johnson for*
Emergency Response Unit

THRU: Chris D. Field, Unit Manager *Chris D. Field*
Emergency Response Unit

TO: Lori Cohen, Acting Director
Office of Environmental Cleanup

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the selected time-critical removal action described herein for the All American Metal Finishing located at 926 5th Avenue S, Kent, King County, Washington ("Site"). Due to the Green River flooding concerns, the Washington Department of Ecology ("Ecology") requested the assistance of the US Environmental Protection Agency ("EPA") in the cleanup of All American Metal Finishing.

This action meets the criteria for initiating a removal action under the National Contingency Plan ("NCP"), 40 C.F.R. § 300.415.

II. SITE CONDITIONS AND BACKGROUND

The CERCLIS ID No. is WAN000025753 and the Site ID No. is 10HT.

A. Site Description

1. Removal site evaluation

The former All American Metal Finishing ("Facility") electroplating facility is located in the lower Green River Valley, Kent, King County, Washington. The Facility operated from September 2007 to September 2009. The operator used various chemicals during the

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surface preparation, treatment, and rinsing processes, and other wastes. The operator did not ship any wastes off-site since December 2008, leaving a significant quantity of liquids and sludges at the Site.

Following a record high level of water behind the 48 year-old Howard Hanson Dam in January 2009 that caused damage to the right abutment of the earth-and-rock dam, the U.S. Army Corps of Engineers ("the Corps") restricted flood storage behind the dam for the next several years while constructing repairs to the dam.¹ The Corps has warned that increased flooding along the Green River Valley is possible due to the dam's reduced capacity for holding water in the reservoir. Should a major flood event occur with the temporary restriction of storage capacity, the Corps has also warned that levees in the valley could be overtopped. While the Corps has mapped only a few of the virtually limitless possibilities for what may occur in a storm event, all downstream cities (including Kent) and residents are urged to plan and prepare for flood season, should higher-than-standard flows be necessary from the dam.² The Facility lies within an active flood plain, and is susceptible to flooding if dam releases exceed channel capacity downstream.

Washington State Department of Ecology

On October 14th, 2009, the Washington State Department of Ecology, Hazardous Waste and Toxics Reduction Program conducted an inspection of the Facility.³ Based on facility operator/generator knowledge, an estimated 25,410 gallons and 7,080 pounds of corrosive aqueous solutions, metal-bearing sludge, and other materials and wastes were inventoried (see Appendix B). As a result of what was present at the Facility and because of the threat of flooding of the nearby Green River, Ecology requested the assistance of EPA to address the corrosive aqueous solutions and metal-bearing sludge at the Site because it lacks the financial resources and statutory authority to preemptively cleanup the Site.⁴

U.S. Environmental Protection Agency

On November 3, 2009, EPA, along with Ecology and Kent Fire Department personnel and the company owner and property owner, conducted a removal assessment at the Facility to determine if the Site warrants a removal action.⁵ Participants confirmed the inventory and location of wastes and materials identified during the October 14, 2009 Ecology inspection, and also noted surface water drainage patterns and other Site features.

¹ U.S. Army Corps of Engineers. 2009 Howard Hanson Dam Pool Restriction Fact Sheet. <http://www.nws.usace.army.mil/PublicMenu/Doc>.

² U.S. Army Corps of Engineers. 2009 Howard Hanson Dam Pool Restriction FAQs. <http://www.nws.usace.army.mil/PublicMenu/Doc>.

³ Rueter, Robert. Washington Department of Ecology. 2009. All American Metal Finishing Site Visit Report.

⁴ Email message. David Misko to Diane Dettling. 2009. USEPA Region 10 CERCLA Emergency Removal at All-American Metal Finishing, Kent, Washington.

⁵ Ecology & Environment. 2009 Trip Report All American Metal Finishing, Kent, Washington.

2. Physical location

The Site is located at 926 5th Avenue South, Kent, King County, Washington, approximately ½-mile east of Highway 167 and ¼-mile north of 159th Street South (47.37224 N; -122.23938 W) (see Figure 1, Appendix A). The population of Kent is about 82,000, and is located about 13 miles from Tacoma and about 20 miles from Seattle.

The Site is located approximately 375 feet from the Green River, home to the following federal threatened and endangered species: Puget Sound Chinook Salmon, Puget Sound Steelhead, and Bull Trout. It is also home to Puget Sound Coho Salmon, a federal species of concern. A federally protected 17.1 acre Freshwater Emergent Wetland (NWI Code - PEMA) is located 450 feet east of the Site.

3. Site characteristics

The Site is a former zinc electroplating facility specializing in rack and barrel plating. The surrounding land use is predominantly industrial with businesses such as an aerospace company, automobile repair shop, and metal fabrication company. The nearest residence is about ¼-mile away.

The Site's location near the Green River and the heavy rainfall that occurs in this area, heighten the risk that the Site may flood. Although the average yearly rainfall in the area of the Site is 39.59 inches, rainfall in the Green River watershed above the dam can be as much as 100 inches a year.

4. Release or threatened release into the environment of a hazardous substance, pollutant, or contaminant

Materials stored at the Site, including the corrosive aqueous and heavy metal bearing solutions, process wastewater, and treatment sludge, are hazardous substances as defined by sections 101(14) and 101(33) of CERCLA, as amended, 42 U.S.C. §9601(14) and (33). In the event of flood, these hazardous substances could be released into the environment.

5. NPL status

This Site is not listed on the National Priorities List (NPL) nor has the Site been proposed for the NPL.

6. Maps, pictures, and other graphic representations

Figure 1 shows the Site location; Photographs 1 through 5 depict the Site. (Appendix A).

B. Other Actions to Date

1. Previous actions

Ecology and EPA have spoken with the owner of the Site and the operator of the Facility and informed them of the concerns related to the Site. The business owner has tried to sell the liquids contained in the building to other plating shops, but has been unsuccessful.

2. Current actions

There are no government or private activities that are currently being performed that have not been previously discussed.

C. State and Local Authorities' Roles

1. State and local actions to date

Ecology conducted an assessment of the Facility which resulted in the inventory of hazardous wastes presented in Appendix B. As a result, and in light of the threat of flooding of the nearby Green River, Ecology requested the assistance of EPA to address the corrosive aqueous solutions and metal-bearing sludge at the Site because it lacks the financial resources and statutory authority to preemptively cleanup the Site.⁶

2. Potential for continued state/local response

EPA will continue to coordinate with Ecology regarding cleanup activities.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As shown in Appendix B, there are an estimated 25,410 gallons and 7,080 pounds OF corrosive aqueous and heavy metal bearing solutions, process wastewater, and treatment sludge stored at the Facility. Additionally, some of the materials stored at the Facility are unknown. Based on common metal finishing operations, there may be a variety of other hazardous substances on-site, including volatile and semi-volatile organic compounds and metals.

The current conditions at this Site meet the following factors which indicate that the Site is a threat to the public health or welfare or the environment, and a removal action is appropriate under section 300.415(b)(2) of the NCP. Any or all of these factors may be

⁶ Email message. David Misko to Diane Dettling. 2009. USEPA Region 10 CERCLA Emergency Removal at All-American Metal Finishing, Kent, Washington.

present at a site, and any one of these factors may determine the appropriateness of a removal action.

- ***Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].***

Process materials used at this electroplating facility include acid/alkaline solutions, heavy metal-bearing solutions. If the Facility were to be inundated by floodwaters, response personnel and other persons in the surrounding community and potentially downstream of the Site could be exposed to toxic hazardous wastes. For example, if the tanks and associated piping were damaged causing the release of their contents, or containers filled with corrosive wastes and other waste materials were carried away by floodwaters, persons could unknowingly be exposed to the orphaned wastes or handle the potentially unstable containers causing spillage and exposure.

The organic and inorganic compounds known or suspect to be on-site can cause a variety of adverse health effects depending on the toxic nature of the chemical; the medium of exposure (i.e., air, soil, or water); the chemical concentration to which an individual is exposed; and the duration and frequency of the exposure. In addition, exposed individuals will have varying degrees of susceptibility to chemicals. Adverse health effects associated with acid/alkaline solutions and heavy metal-bearing solutions may include cancer (hexavalent chromium), developmental toxicity (lead, mercury), neurotoxicity (solvents, mercury), chemical burns (acids and alkalis), or dermal, respiratory, or eye irritation (acid vapors, metals, solvents).

In addition, aquatic life and other animals may be impacted by a release in case of flood.

- ***Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)].***

If a release of aqueous corrosive and heavy metal-bearing solutions, and/or sludge, were to occur, these wastes could be mobilized off-site into adjacent sensitive ecosystems (i.e., the nearby wetland and/or Green River).

- ***Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that pose a threat of release [300.415(b)(2)(iii)].***

Floodwaters could inundate the Facility. If the tanks, containers and associated piping were damaged in a flood, their contents could be released. In addition, containers filled with corrosive wastes and other waste materials could be carried away by floodwaters, and a person could unknowingly be exposed to the orphaned wastes or handle the potentially unstable containers causing spillage and exposure.

- ***Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released (300.415[b][2][v]).***

The risk of flood is increased this year because of weakness discovered in the Howard Hanson Dam. Since it is likely to take 18 months or more to complete the repair of the dam and the Facility lies within the active flood plain, it is susceptible to flooding if dam releases exceed channel capacity downstream. The facility lies within an active flood plain, and is susceptible to flooding if dam releases exceed channel capacity downstream.⁷ The chance of flooding increases in the event of heavy rainfall.

- **The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)]**

As stated above, Ecology requested the assistance of EPA at the Site because the State lacks the financial resources and statutory authority to preemptively cleanup the Site.⁸ Further, while the dam itself is not in immediate danger of failing, Ecology also stated that due to the proximity of the AAMF facility to the Green River, Ecology believes it is the greatest single risk to causing widespread environmental contamination due to the increased probability of flooding in the Green River Valley.

There are no other known agencies that possess the expertise or resources to conduct a response action at the Site in a timely manner.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed actions

Removal of liquids and sludge and off-site disposal are the only feasible solutions for mitigating threats posed by the situation. Best management practices will be employed during the removal action in order to avoid adverse affects.

1. Proposed action description

Identification of solid wastes and hazardous wastes

Unknown materials will be characterized to determine whether the materials are solid or

⁷ City of Kent, Washington, Emergency Management, Green River/Howard Hanson Dam Website: <http://www.ci.kent.wa.us/emergencymanagement/index>.

⁸ Email message. David Misko to Diane Dettling. 2009. USEPA Region 10 CERCLA Emergency Removal at All-American Metal Finishing, Kent, Washington.

hazardous wastes. All wastes will be evaluated for bulking compatibility and for recycling and disposal.

Packaging, labeling, transportation, and recycling or disposal of solid and hazardous wastes

Compatible liquid wastes will be removed from the various tanks and containers and bulked into tanker trucks, and compatible solid wastes will be removed and overpacked into containers. Non-compatible liquid and solid wastes and other miscellaneous wastes will also be overpacked into containers. All wastes will be properly labeled, transported, and recycled or disposed of at an EPA-approved facility.

Decontamination of process equipment and storage tanks

Production process equipment and storage tanks will be inspected to ensure all treatment sludges and residues are removed. The equipment and storage tanks will then be properly decontaminated and left in-place.

Post-removal site controls

EPA does not expect that post-removal site controls such as maintenance of fences and signage will be required because the hazardous and non-hazardous wastes should be removed from the Site.

2. Contribution to remedial performance

The proposed removal action will complete the cleanup, thus no further action is required.

3. Engineering Evaluation/Cost Analysis (EE/CA)

This proposed action is for a time-critical removal action, and therefore an EE/CA is not required.

4. Applicable or relevant and appropriate requirements (ARARs)

The NCP requires that removal actions attain Applicable or Relevant and Appropriate Requirements (ARARs) under federal or state environment or facility siting laws, to the extent practicable. (40 CFR § 300.415[j]) In determining whether compliance with ARARs is practicable, EPA may consider the scope of the removal action and the urgency of the situation. (40 CFR § 300.415[j]).

Resource Conservation and Recovery Act [42 USC § 6901], Subtitle C - Hazardous Waste Management [40 CFR Parts 260 to 279]. Federal hazardous waste regulations specify hazardous waste identification, management, and disposal requirements. Where Washington has an authorized state hazardous waste program (RCW 70.105; Chapter

173-303 WAC), it applies in lieu of the federal program.

Resource Conservation and Recovery Act [42 USC § 6901], Subtitle D - Managing Municipal and Solid Waste [40 CFR Parts 257 and 258]. Subtitle D of RCRA establishes a framework for controlling the management of non-hazardous solid waste. Subtitle D is potentially applicable to solid waste generation and management at the Site.

Washington State Hazardous Waste Management Act and Dangerous Waste Regulations [RCW 70.105; Chapter 173-303 WAC]. Washington State Dangerous Waste regulations govern the handling and disposition of dangerous waste, including identification, accumulation, storage, transport, treatment, and disposal. The Dangerous Waste regulations are potentially applicable to generating, handling, and managing dangerous waste at the Site, and would be potentially relevant and appropriate.

Washington State Solid Waste Handling Standards [RCW 70.95; Chapter 173-350 WAC]. Washington State Solid Waste Handling Standards apply to facilities and activities that manage solid waste. The regulations set minimum functional performance standards for proper handling and disposal of solid waste; describe responsibilities of various entities; and stipulate requirements for solid waste handling facility location, design, construction, operation, and closure.

5. Project schedule

The project is estimated to require one week to complete, including mobilization and demobilization activities.

B. Estimated Costs

Extramural Regional Removal Allowance ERRS	\$119,000
Extramural Non-Regional Removal Allowance START	\$40,000
Subtotal Extramural Costs	\$159,000
Extramural Costs Contingency (20%)	\$31,800
Total Removal Project Ceiling	\$190,800

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delay in action or no action at this Site would increase the actual or potential threats to the public health and/or the environment.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

See Confidential Enforcement Addendum. (Appendix C).

IX. RECOMMENDATION

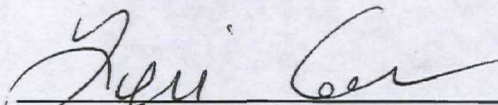
This decision document represents the selected removal action for the All American Metal Finishing Site, in Kent, King County, Washington, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b) criteria for a removal and I recommend your approval of the proposed removal action. The total project ceiling, if approved, will be \$190,800. Of this, as much as \$119,000 comes from the Regional removal allowance.

X. APPROVAL/DISAPPROVAL


Approval

Disapproval


Lori Cohen, Acting Division Director
Environmental Cleanup Division

12/18/09
Date

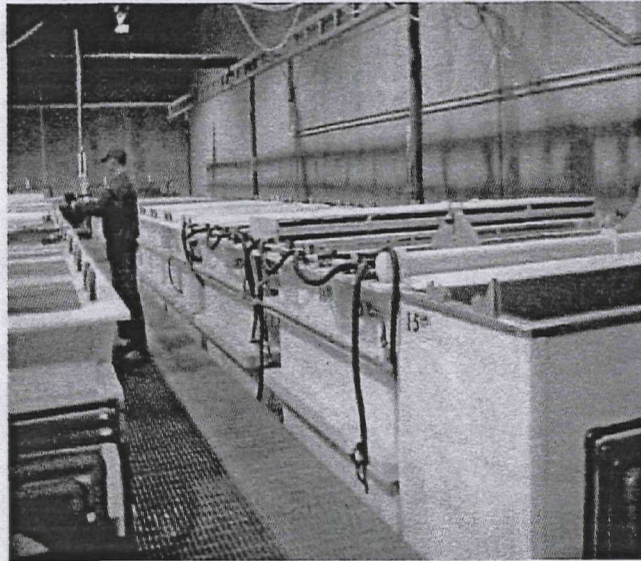
APPENDIX A: FIGURE AND PHOTOGRAPHS



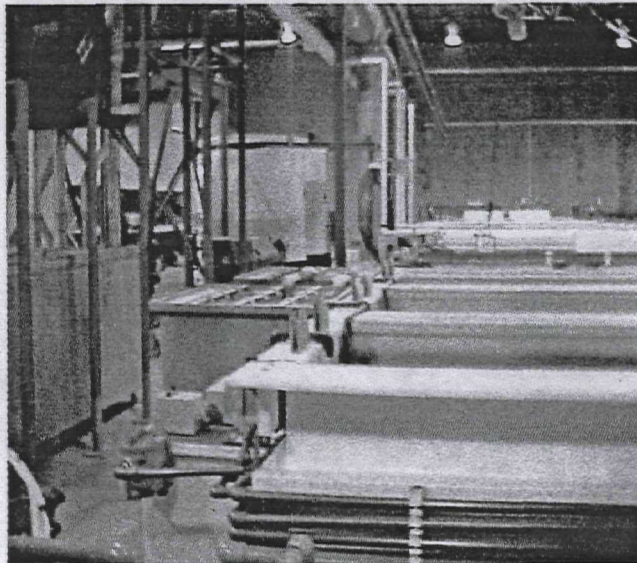
Figure 1: Site Location



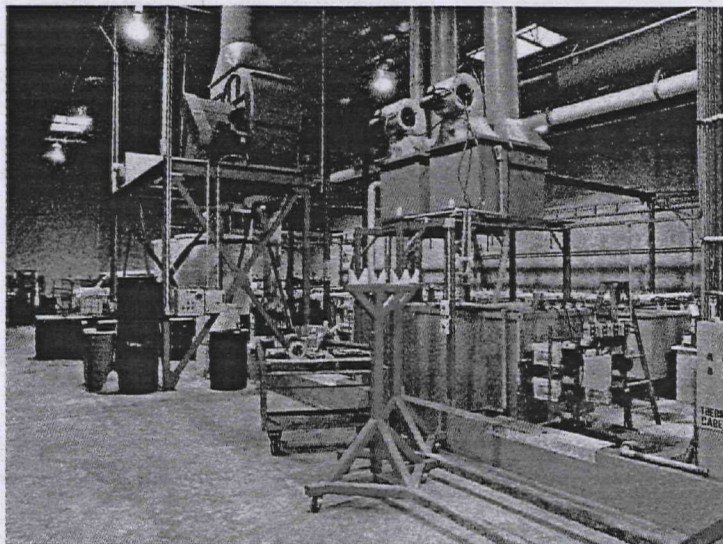
Photograph 1: Exterior of All American Metal Finishing



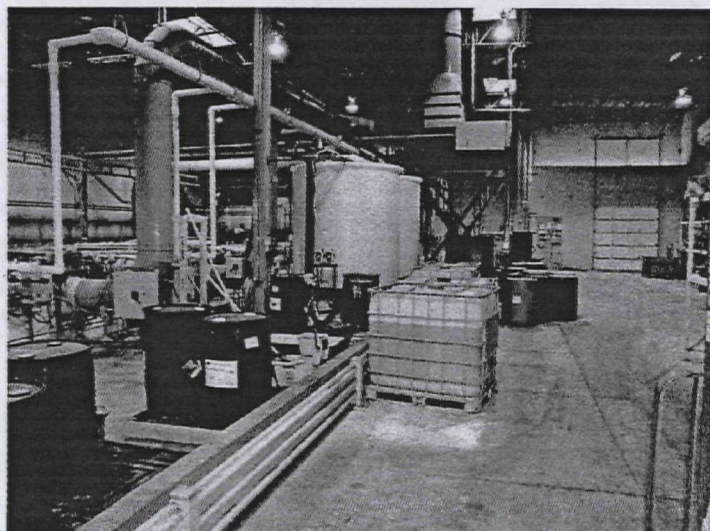
Photograph 2: Plating Line



Photograph 3: Chemical Processing Line



Photograph 4: Waste Treatment System



Photograph 5: Containment Wall

APPENDIX B
Washington State Department of Ecology
October 14, 2009 Inspection Inventory

Process Tanks			
Tank Number	Material	Quantity (Gallons)	Waste Characterization
1	30% Muriatic Acid	600	D002
2	Muriatic Acid Rinse	700	Unknown
3	Metal Cleaner 9% Sodium Metasilicate	700	D002
4	Metal Cleaner 9% Sodium Metasilicate	700	D002
5	Metal Cleaner 9% Sodium Hydroxide	700	D002
6	Metal Cleaner 9% Sodium Hydroxide	700	D002
7	Metal Cleaner Rinse	700	Unknown
8	Metal Cleaner Rinse	700	Unknown
9	Metal Cleaner Rinse	700	Unknown
10	13% Muriatic Acid	750	D002
11	13% Muriatic Acid	750	D002
12	13% Muriatic Acid Rinse	700	Unknown
13	13% Muriatic Acid Rinse	700	Unknown
14	13% Muriatic Acid Rinse	600	Unknown
15	Rinse Water	100	Unknown
16	Zinc Plating Solution	1600	D002
16A	Zinc Generation	160	D002
17	Zinc Plating Solution	1400	D002
17A	Zinc Generation	160	D002
18	Zinc Plating Rinse	700	Unknown
19	Zinc Plating Rinse	700	Unknown
20	Zinc Plating Rinse	700	Unknown
21	Nitric Acid Pre-Dip Solution	700	D002
22	TRI V 121 (Chrome III)	700	D002
23	TRI V 121 (Chrome III) Rinse	700	Unknown
24	TRI V 121 (Chrome III) Rinse	700	Unknown
25	TRI V 121 (Chrome III) Yellow Converter Rinse	700	D002
26	TRI V 121 (Chrome III) Yellow Converter Rinse	700	Unknown
27	TRI V 121 (Chrome III) Yellow Converter Rinse	700	Unknown
28	TRI V 121 (Chrome III) Yellow Converter Rinse	700	Unknown
29	Spray Rinse	0	Unknown
30	Zinc Chro Shield	800	Unknown

Wastewater Treatment and Evaporation Area		
Container	Quantity	Waste Characterization
Boil Down Tank	1000 gallons	Unknown
Settling Tank No. 1	750 gallons sludge	WT02
Settling Tank No. 2	800 gallons sludge	WT02
2 Sump Pump Tanks	100 gallons	Unknown

Other Materials		
Material	Quantity	Waste Characterization
Filter Cake Waste	1800 pounds	D002
Product (Caustic & Sulfuric Acid)	110 gallons	Unknown
Off Specification Product	1030 gallons	D002, WSC02, unknown
Special Waste Sludge	5280 pounds	WT02, unknown